EP 2 247 060 A1

FIG. 1

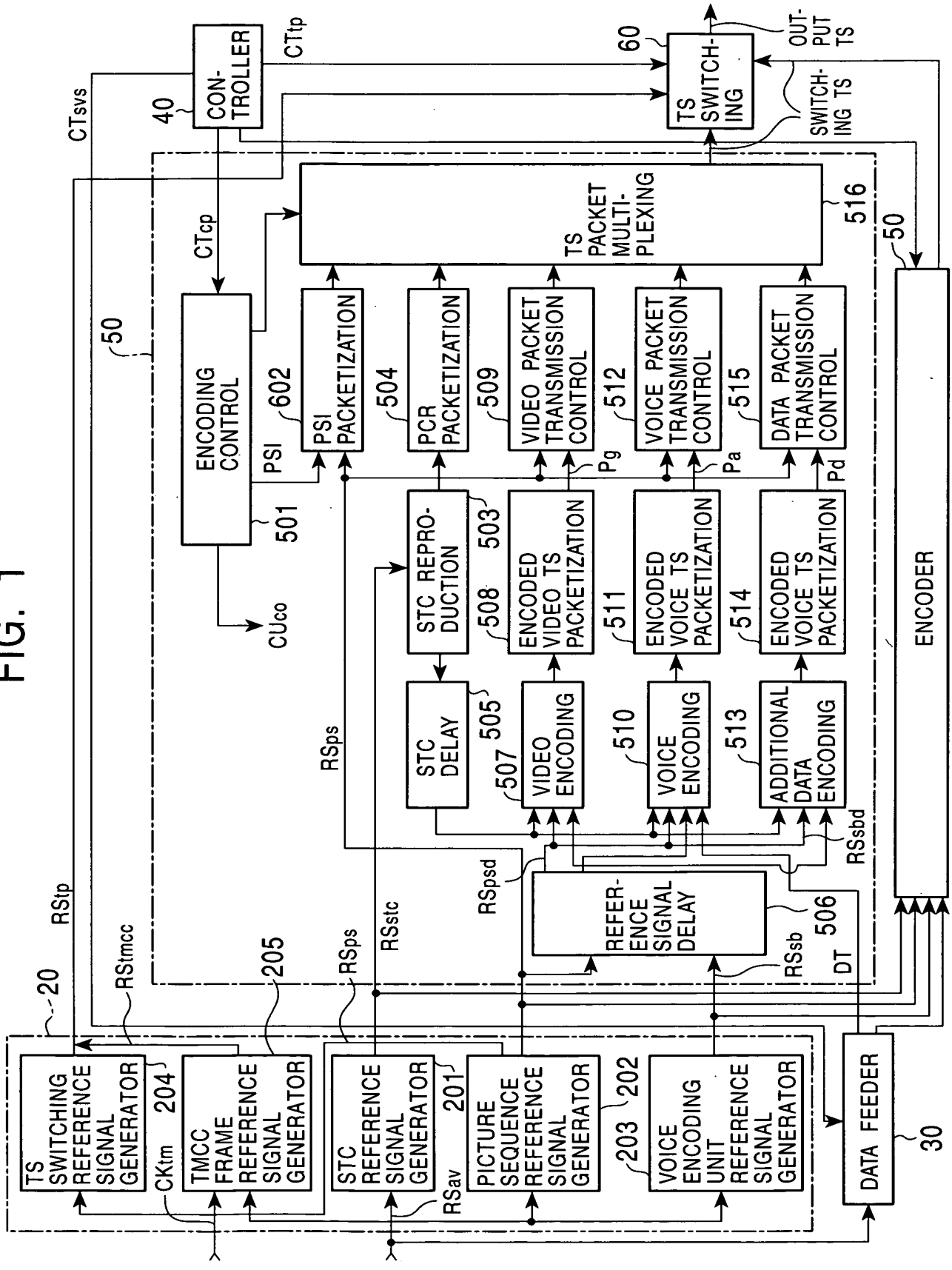


FIG. 2

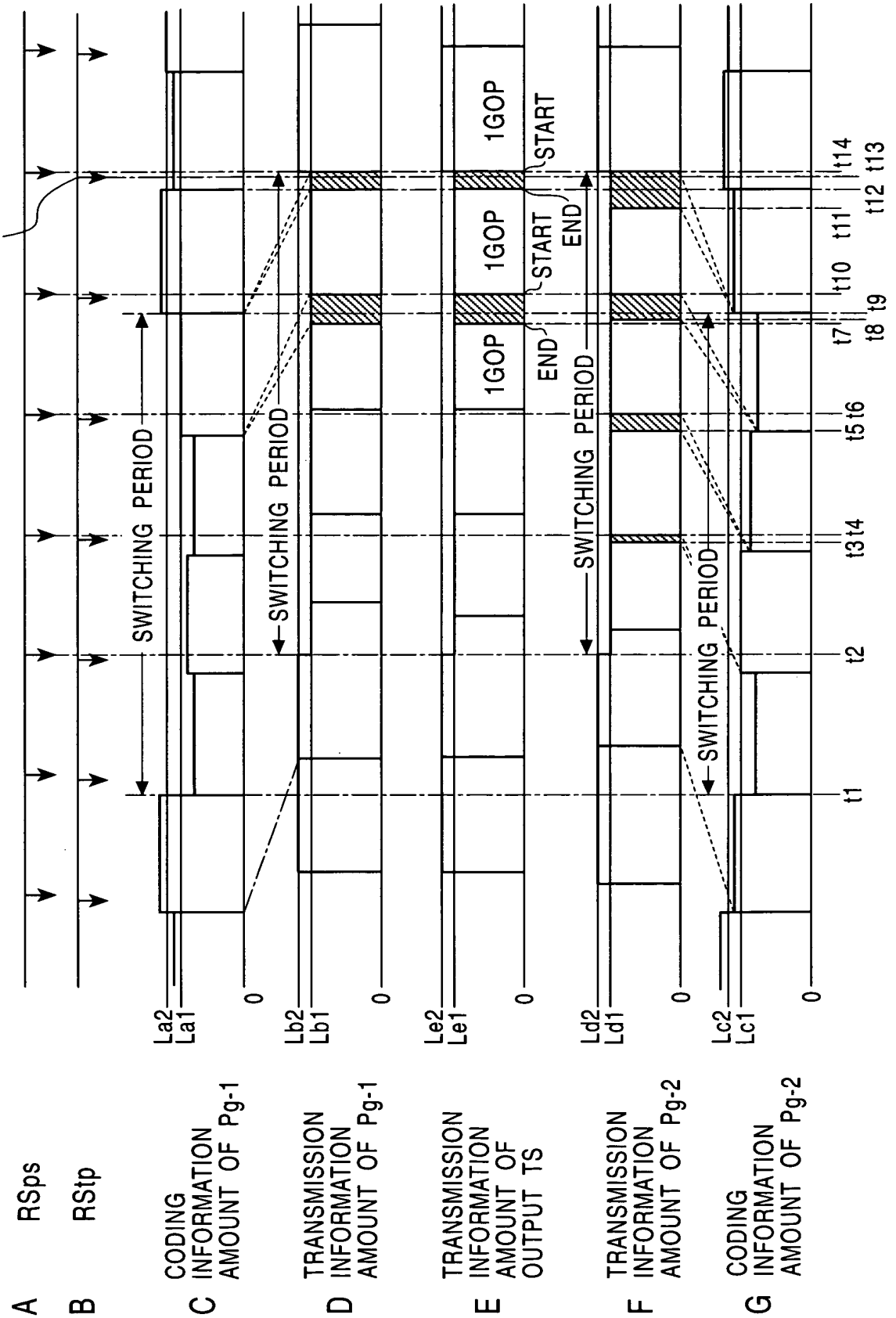

A RSps
B RStp
C CODING INFORMATION AMOUNT OF Pg-1
D TRANSMISSION INFORMATION AMOUNT OF Pg-1
E TRANSMISSION INFORMATION AMOUNT OF OUTPUT TS
F TRANSMISSION INFORMATION AMOUNT OF Pg-2
G CODING INFORMATION AMOUNT OF Pg-2
TS SWITCHING POSITION
SWITCHING PERIOD
1GOP
START
END
La2
La1
Lb2
Lb1
Le2
Le1
Ld2
Ld1
Lc2
Lc1
0
t1
t2
t3
t4
t5
t6
t7
t8
t9
t10
t11
t12
t13
t14

FIG. 3

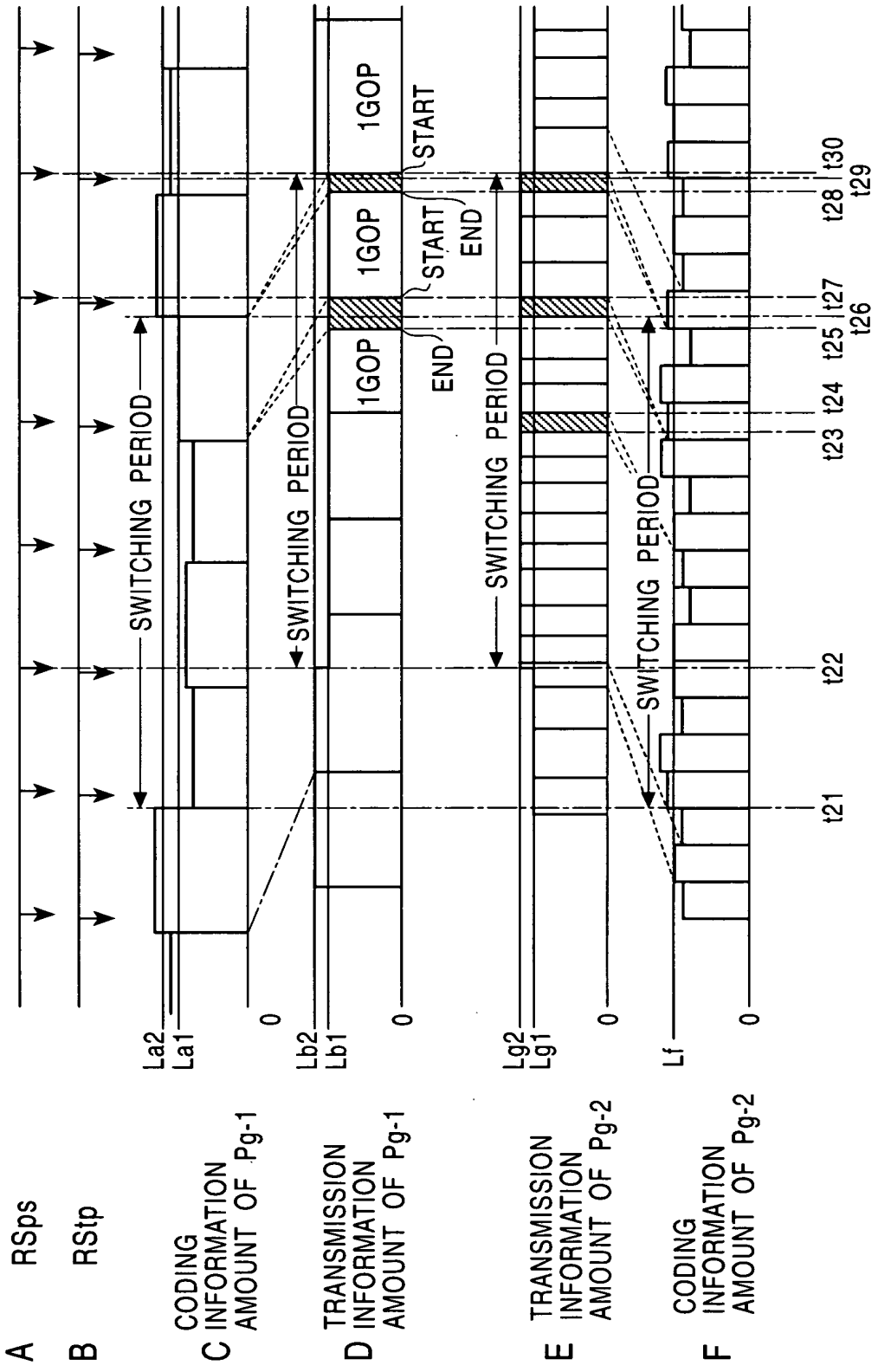

A RSps
B RStp
C CODING INFORMATION AMOUNT OF Pg-1
D TRANSMISSION INFORMATION AMOUNT OF Pg-1
E TRANSMISSION INFORMATION AMOUNT OF Pg-2
F CODING INFORMATION AMOUNT OF Pg-2
SWITCHING PERIOD
1GOP
START
END
La2
La1
Lb2
Lb1
Lg2
Lg1
Lf
0
t21
t22
t23
t24
t25
t26
t27
t28
t29
t30

FIG. 4

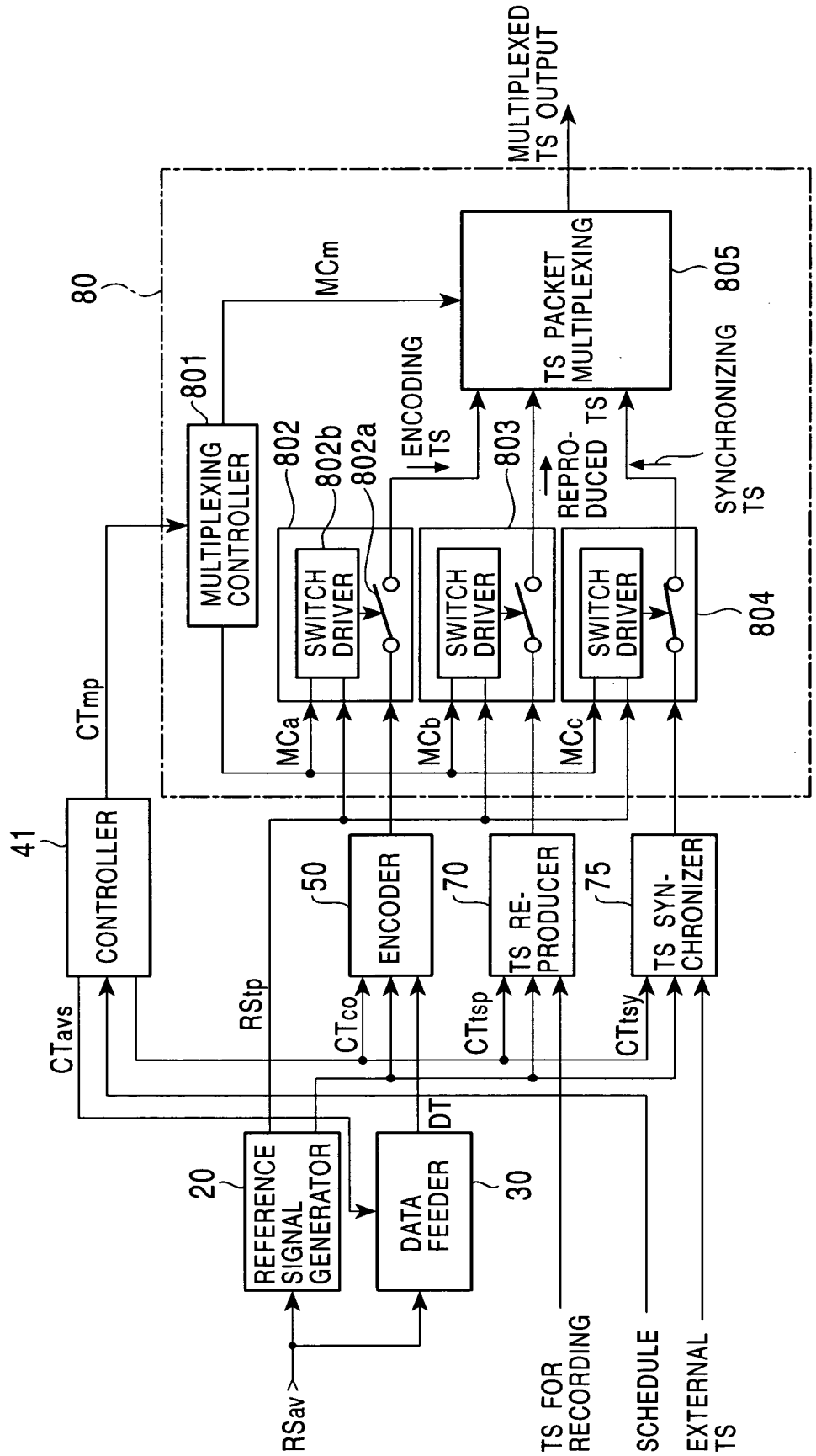

MULTIPLEXED TS OUTPUT
80
MCm
801
MULTIPLEXING CONTROLLER
TS PACKET MULTIPLEXING
805
ENCODING TS
REPRO-DUCED TS
SYNCHRONIZING TS
802
802b
802a
803
SWITCH DRIVER
SWITCH DRIVER
SWITCH DRIVER
804
MCa
MCb
MCc
CTmp
41
CONTROLLER
50
ENCODER
70
TS RE-PRODUCER
75
TS SYN-CHRONIZER
CTavs
RStp
CTco
CTtsp
CTtsy
20
REFERENCE SIGNAL GENERATOR
DT
DATA FEEDER
30
RSav
TS FOR RECORDING
SCHEDULE
EXTERNAL TS

FIG. 5

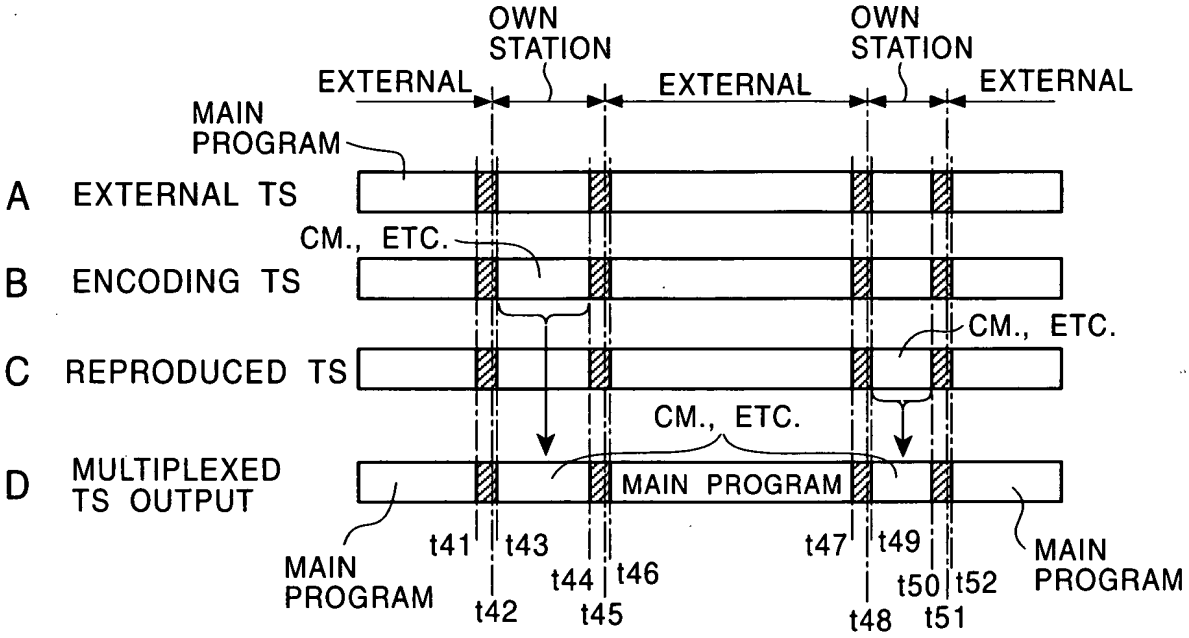

OWN STATION
OWN STATION
EXTERNAL
EXTERNAL
EXTERNAL
MAIN PROGRAM
A EXTERNAL TS
CM., ETC.
B ENCODING TS
CM., ETC.
C REPRODUCED TS
CM., ETC.
D MULTIPLEXED TS OUTPUT
MAIN PROGRAM
MAIN PROGRAM
MAIN PROGRAM
t41
t42
t43
t44
t45
t46
t47
t48
t49
t50
t51
t52

FIG. 6

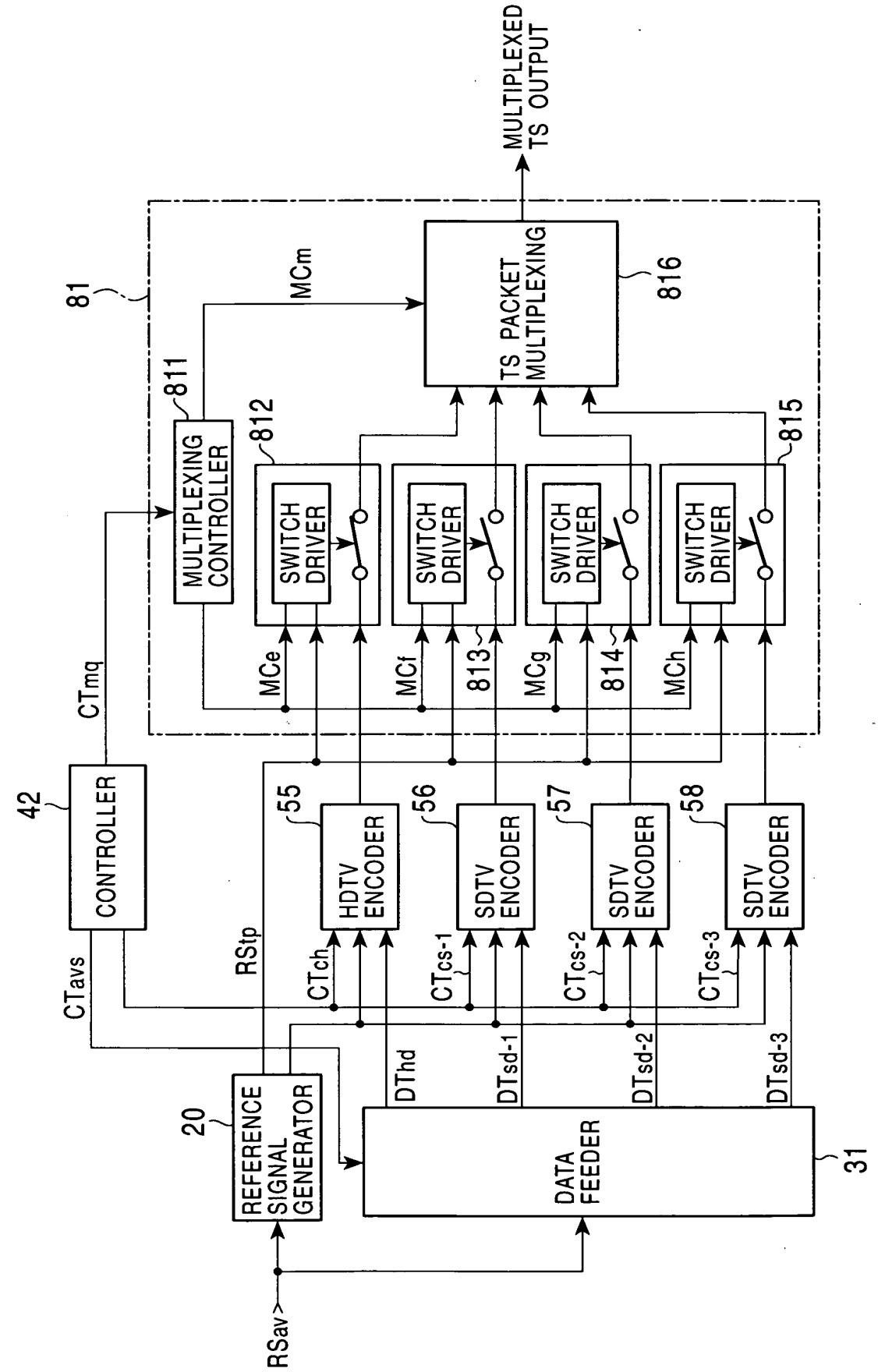

MULTIPLEXED TS OUTPUT
81
MCm
TS PACKET MULTIPLEXING
816
811
MULTIPLEXING CONTROLLER
812
SWITCH DRIVER
SWITCH DRIVER
SWITCH DRIVER
SWITCH DRIVER
815
MCe
MCf
813
MCg
814
MCh
CTmq
42
CONTROLLER
55
HDTV ENCODER
56
SDTV ENCODER
57
SDTV ENCODER
58
SDTV ENCODER
RStp
CTavs
CTch
CTcs-1
CTcs-2
CTcs-3
DThd
DTsd-1
DTsd-2
DTsd-3
20
REFERENCE SIGNAL GENERATOR
DATA FEEDER
31
RSav

FIG. 7

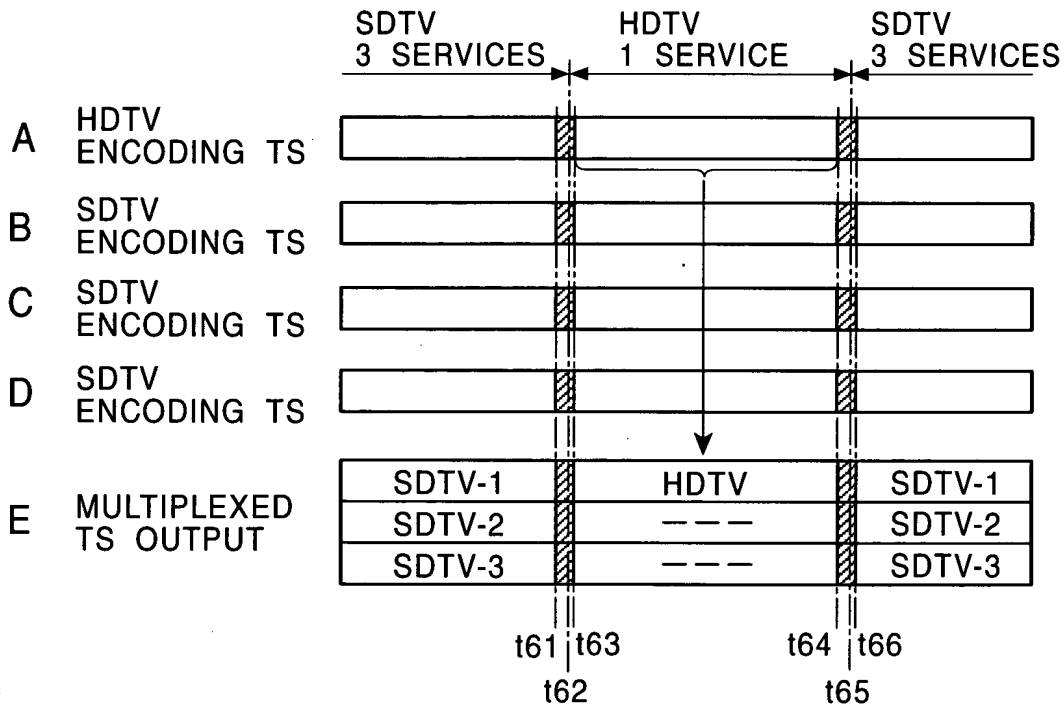

SDTV
3 SERVICES
HDTV
1 SERVICE
SDTV
3 SERVICES
A
HDTV
ENCODING TS
B
SDTV
ENCODING TS
C
SDTV
ENCODING TS
D
SDTV
ENCODING TS
E
MULTIPLEXED
TS OUTPUT
SDTV-1
SDTV-2
SDTV-3
HDTV
SDTV-1
SDTV-2
SDTV-3
t61
t62
t63
t64
t65
t66

FIG. 8

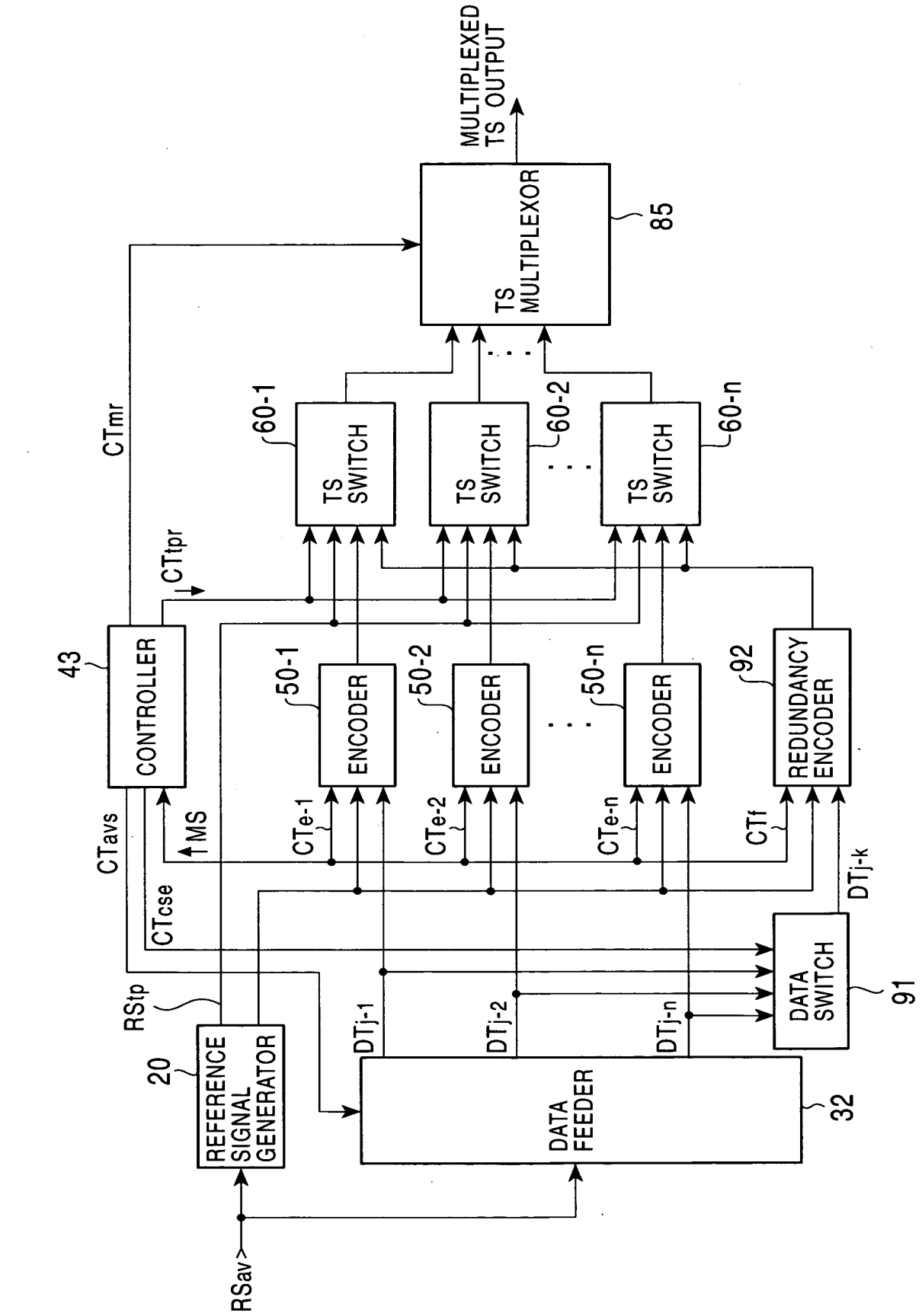

MULTIPLEXED TS OUTPUT
TS MULTIPLEXOR
85
TS SWITCH
60-1
60-2
60-n
CTmr
CTtpr
43
CONTROLLER
ENCODER
50-1
50-2
50-n
REDUNDANCY ENCODER
92
CTavs
MS
CTcse
CTe-1
CTe-2
CTe-n
CTf
DTj-k
DATA SWITCH
91
RStp
20
REFERENCE SIGNAL GENERATOR
DTj-1
DTj-2
DTj-n
DATA FEEDER
32
RSav

FIG. 9

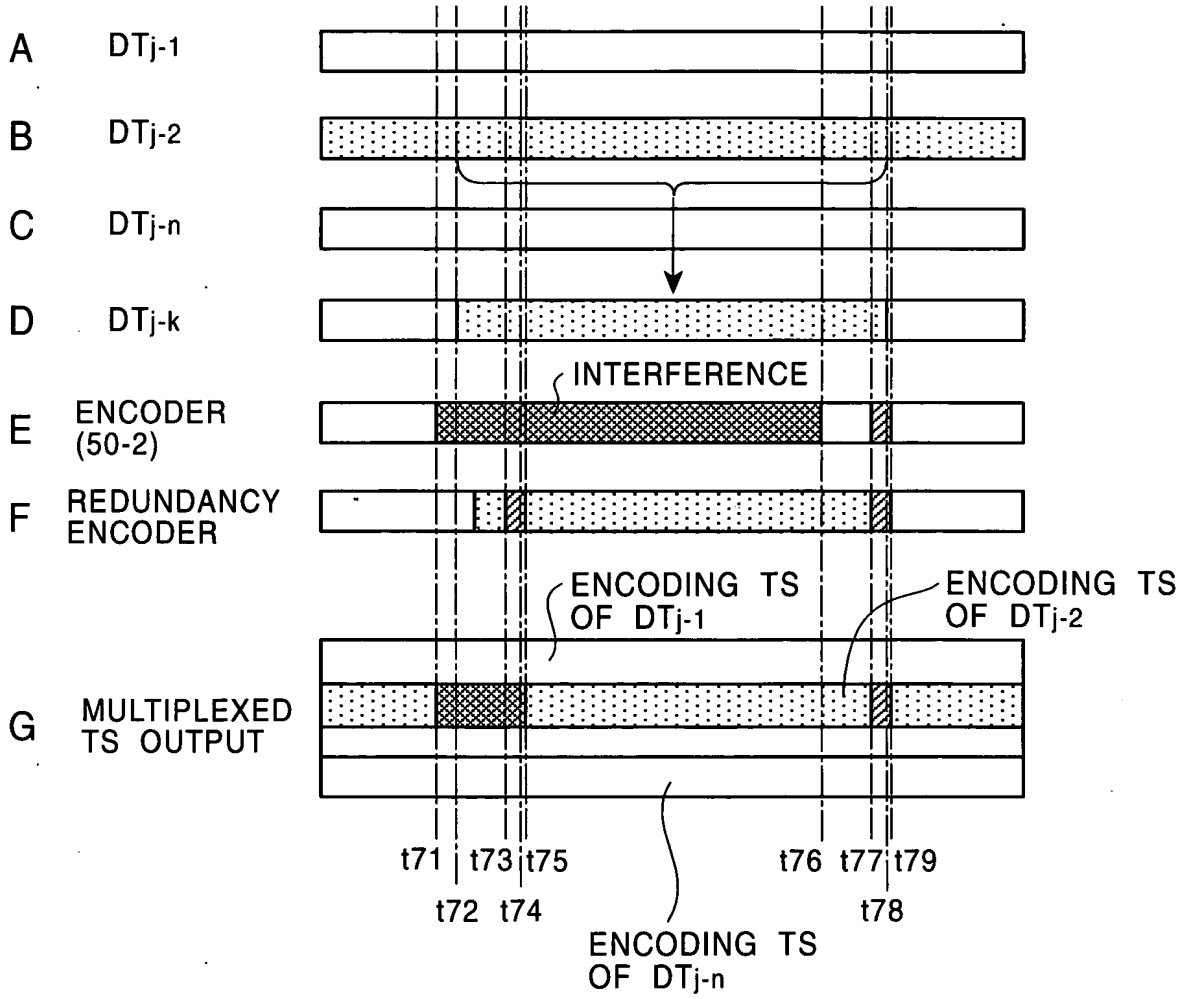

A
DTj-1
B
DTj-2
C
DTj-n
D
DTj-k
INTERFERENCE
E
ENCODER
(50-2)
F
REDUNDANCY
ENCODER
ENCODING TS
OF DTj-1
ENCODING TS
OF DTj-2
G
MULTIPLEXED
TS OUTPUT
t71
t72
t73
t74
t75
t76
t77
t78
t79
ENCODING TS
OF DTj-n

FIG. 10

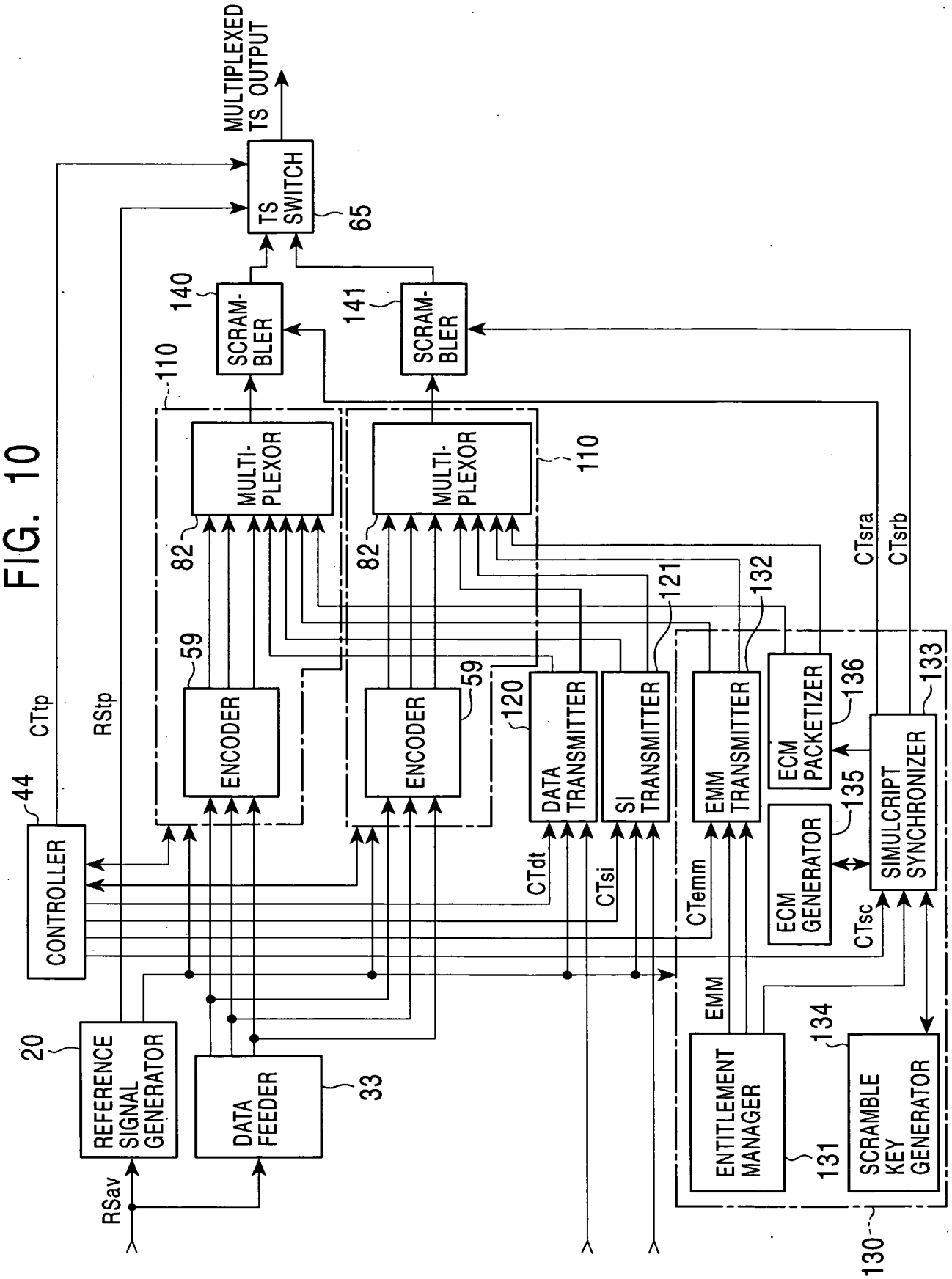

MULTIPLEXED TS OUTPUT
TS SWITCH
65
SCRAM-BLER
140
141
110
MULTI-PLEXOR
82
59
ENCODER
120
DATA TRANSMITTER
SI TRANSMITTER
121
EMM TRANSMITTER
132
ECM PACKETIZER
136
135
ECM GENERATOR
SIMULCRIPT SYNCHRONIZER
133
CTsra
CTsrb
CTdt
CTsi
CTemm
CTsc
CTtp
RStp
44
CONTROLLER
20
REFERENCE SIGNAL GENERATOR
DATA FEEDER
33
RSav
EMM
ENTITLEMENT MANAGER
131
134
SCRAMBLE KEY GENERATOR
130

FIG. 11

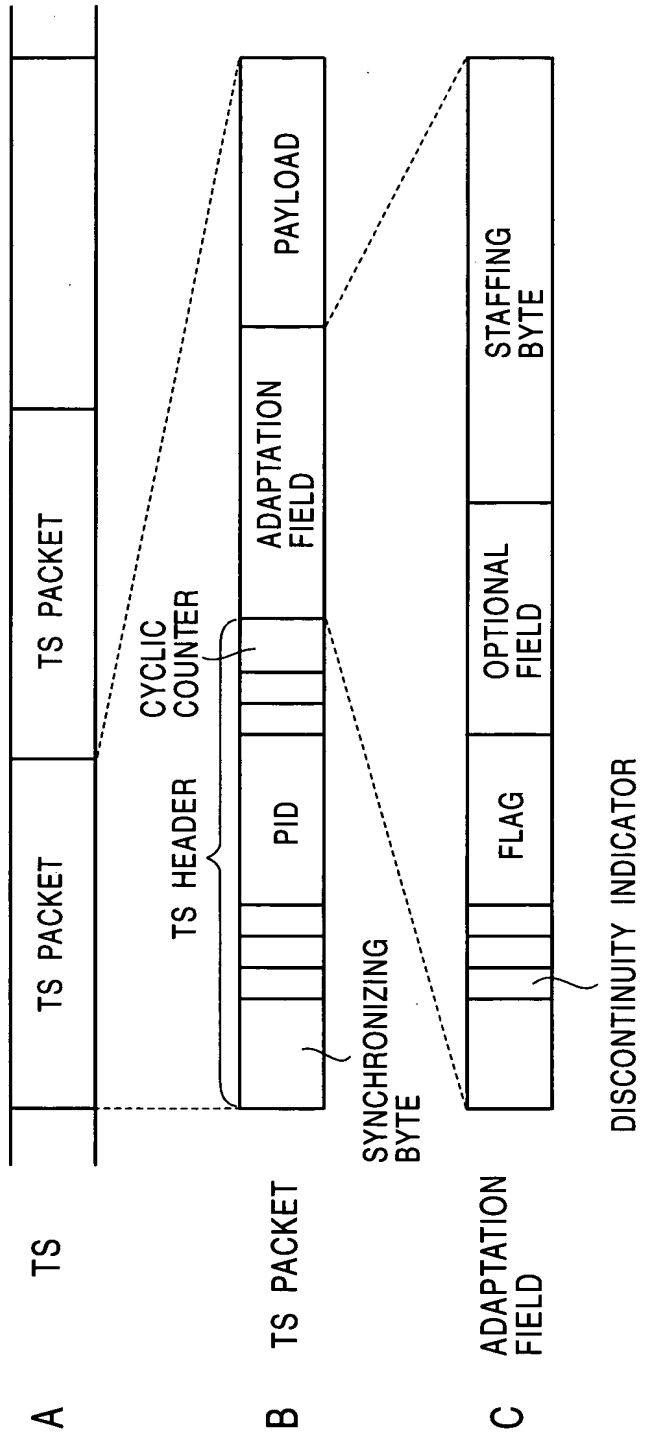
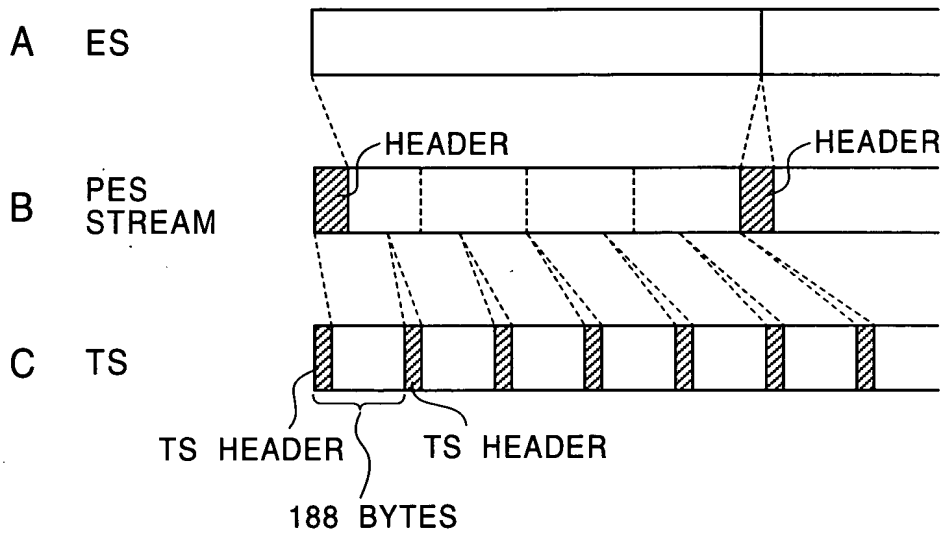

A
TS
TS PACKET
TS PACKET
B
TS PACKET
TS HEADER
PID
CYCLIC COUNTER
ADAPTATION FIELD
PAYLOAD
SYNCHRONIZING BYTE
C
ADAPTATION FIELD
FLAG
OPTIONAL FIELD
STAFFING BYTE
DISCONTINUITY INDICATOR

FIG. 12



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